

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of:	)	
	)	
Rycharde Jeffery Hawkes, <i>et al.</i>	)	Confirmation No: 5467
	)	
Serial No.: 10/695,549	)	Group Art Unit: 2121
	)	
Filed: October 28, 2003	)	Examiner: Stevens, Thomas H.
	)	
For: Simulation at Two Different Levels of Complexity	)	Atty. Docket No.: 30018432-2

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

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Sir:

This Appeal Brief under 37 C.F.R. § 41.37 is submitted in support of the Notice of Appeal filed April 22, 2008, responding to the final Office Action mailed January 22, 2008.

It is not believed that extensions of time or fees are required to consider this Appeal Brief. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefor are hereby authorized to be charged to Deposit Account No. 08-2025.

### **I. Real Party in Interest**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

### **II. Related Appeals and Interferences**

There are no known related appeals or interferences that will affect or be affected by a decision in this Appeal.

### **III. Status of Claims**

Claims 1, 3-6, 8-11, and 13-14 stand finally rejected. Claims 2, 7, and 12 have been canceled. The final rejections of claims 1, 3-6, 8-11, and 13-14 are appealed.

### **IV. Status of Amendments**

No amendments have been made subsequent to the final office action mailed January 22, 2008. The claims in the attached Claims Appendix (see below) reflect the present state of Applicants' claims.

## **V. Summary of Claimed Subject Matter**

The claimed inventions are summarized below with reference numerals and references to the written description ("specification") and drawings. The subject matter described in the following appears in the original disclosure at least where indicated, and may further appear in other places within the original disclosure.

Embodiments according to independent claim 1 describe a method of simulating a creature for use in two different complexities of simulation. Applicants' specification, page 3, lines 11-13. The method comprises utilizing a model of the creature that comprises at least two portions. Applicants' specification, page 3, lines 14-15. The at least two portions comprises a first portion which contains functions for use in both of the different complexities of simulation, Applicants' specification, page 3, lines 15-16, and a second portion comprising two alternative versions. Applicants' specification, page 3, line 7. The two alternative versions comprises a first version for use in one of the different complexities of simulation, Applicants' specification, page 3, lines 18-19, and a second version for use in the other of the different complexities of simulation. Applicants' specification, page 3, lines 19-20 and page 6, lines 28-33. The first portion comprises a behavior selection mechanism arranged to select the behavior of the creature, Applicants' specification, page 6, lines 17-21, and the second portion is arranged to execute the selected behavior. Applicants' specification, page 6, lines 27-28.

Embodiments according to independent claim 9 describe a method of simulating activities of a plurality of creatures. Such a method comprises utilizing at least two modes of simulation. Applicants' specification, page 5, lines 30-32 and page 7, lines

19-23. The at least two modes of simulation comprising a first mode arranged to simulate the activities of all of the creatures and a second mode arranged to simulate an activity of at least one of the creatures at a more detailed level than the first mode. Applicants' specification, page 7, lines 1-17. A model of a creature simulated in both modes of simulation comprises at least two portions. Applicants' specification, page 3, lines 14-15. The at least two portions comprises a first portion which contains functions arranged for use in both of the modes of simulation and a second portion comprising two alternative versions--a first version for use in the first mode of simulation and a second version for use in the second mode. Applicants' specification, page 3, lines 15-20 and page 6, lines 28-33.

Embodiments according to independent claim 10 describe a method of simulating a process at two different levels of complexity. Applicants' specification, page 3, lines 11-13. Such a method comprises utilizing a model that comprises at least two portions. Applicants' specification, page 3, lines 14-15. The at least two portions comprises a first portion which contains functions for use in both of the different complexities of simulation and a second portion comprising two alternative versions. Applicants' specification, page 3, line 7. A first version is for use in one of the different complexities of simulation, Applicants' specification, page 3, lines 18-19, and a second version is for use in the other of the different complexities of simulation. Applicants' specification, page 3, lines 19-20 and page 6, lines 28-33. Further, the second version is for use in the less complex of the simulations and is arranged to approximate the functionality of the first version. Applicants' specification, page 6, lines 30-33.

Embodiments according to independent claim 14 describe a simulator device arranged to simulate a creature in two different complexities of simulation. Applicants' specification, page 12, lines 14-18. The device is arranged to utilize a model of the creature that comprises at least two portions. Applicants' specification, page 3, lines 14-15. A first portion contains functions used in both of the different complexities of simulation, Applicants' specification, page 3, lines 15-16, and a second portion comprises two alternative versions. Applicants' specification, page 3, line 7. A first version is used in one of the different complexities of simulation, Applicants' specification, page 3, lines 18-19, and a second version is used in the other of the different complexities of simulation. Applicants' specification, page 3, lines 19-20 and page 6, lines 28-33. Further, the second version is for use in the less complex of the simulations and is arranged to approximate the functionality of the first version. Applicants' specification, page 6, lines 30-33.

#### **VI. Grounds of Rejection to be Reviewed on Appeal**

The following grounds of rejections are to be reviewed on appeal:

Claims 1, 3-6, 8-11, and 13-14 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Meyer* ("From SAB90 to SAB94: Four Years of Animat Research") in view of *Funge* ("Cognitive Modeling for Games and Animation").

## VII. Arguments

Claims 1, 3-6, 8-11, and 13-14 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Meyer* in view of *Funge*.

### a. Applicants' Claim 1

As provided in independent claim 1, Applicants claim:

A method of simulating a creature for use in two different complexities of simulation, the method comprising:

***utilizing a model of the creature that comprises at least two portions:***

***a first portion which contains functions for use in both of said different complexities of simulation; and***

***a second portion comprising two alternative versions:***

***a first version for use in one of said different complexities of simulation; and***

***a second version for use in the other of said different complexities of simulation,***

***wherein said first portion comprises a behavior selection mechanism arranged to select the behavior of said creature and said second portion is arranged to execute the selected behavior.***

(Emphasis added).

Applicants respectfully submit that independent claim 1 is allowable for at least the reason that *Meyer* in view of *Funge* does not disclose, teach, or suggest at least "utilizing a model of the creature that comprises at least two portions: a first portion which contains functions for use in both of said different complexities of simulation; and a second portion comprising two alternative versions: a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation, wherein said first portion comprises a behavior selection mechanism arranged to select the behavior of said creature and said second portion is arranged to execute the selected behavior," as emphasized above.

Rather, *Meyer* generally summarizes the state of the art on the adaptive behavior in animats. In this review of the art, *Meyer* fails to disclose "utilizing a model of the creature that comprises at least two portions: a first portion which contains functions for use in both of said different complexities of simulation; and a second portion comprising two alternative versions: a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 1. For example, *Meyer* does not disclose two versions of a portion arranged to execute a selected behavior in different complexities of simulation. As a result, *Meyer* fails to teach or suggest at least "utilizing a model of the creature that comprises at least two portions: a first portion which contains functions for use in both of said different complexities of simulation; and a second portion comprising two alternative versions: a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 1.

Further, *Funge* describes the concept of cognitive modeling for computer animation. For example, *Funge* states that "Cognitive models go beyond behavioral models in that they govern what a character knows, how that knowledge is acquired, and how it can be used to plan physical and sensing actions." Page 41. In its description of cognitive modeling, *Funge* fails to disclose "utilizing a model of the creature that comprises at least two portions: a first portion which contains functions for use in both of said different complexities of simulation; and a second portion comprising two alternative versions: a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of

simulation," as recited in claim 1. For example, the final Office Action issued January 22, 2008, states that *Funge* adequately discloses the two different versions of the second portion recited above in claim 1. In response, Applicants note that *Funge* describes how researchers have turned to sophisticated machine-learning techniques to help them acquire higher fidelity on page 47. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure does not disclose a second portion of a model of a creature comprising "a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 1. See page 5 of Final Office Action. Further, Applicants note that *Funge* describes a cognitive modeling hierarchy on page 42. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure also does not disclose a second portion of a model of a creature comprising "a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 1. See page 5 of Final Office Action. Additionally, Applicants note that *Funge* describes the characterization of an action performed by a graphical character as either a primitive action or complex compound action on page 44. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure also does not disclose a second portion of a model of a creature comprising "a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 1. See page 5 of Final Office Action.

Therefore, Applicants respectfully submit that the individual parts of the *Funge* disclosure in total or in combination with *Meyer* fails to teach or suggest at least

"utilizing a model of the creature that comprises at least two portions: a first portion which contains functions for use in both of said different complexities of simulation; and a second portion comprising two alternative versions: a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation, wherein said first portion comprises a behavior selection mechanism arranged to select the behavior of said creature and said second portion is arranged to execute the selected behavior," as recited in claim 1.

As a result, claim 1 is patentable over *Meyer* in view of *Funge*, and the rejection of claim 1 should be overturned. Dependent claims 3-6 and 8 contain all the features of allowable independent claim 1. For at least this reason, the rejections of claims 3-6 and 8 should also be overturned.

**b. Applicants' Claim 9**

As provided in independent claim 9, Applicants claim:

A method of simulating activities of a plurality of creatures, the method comprising ***utilizing at least two modes of simulation:***

***a first mode arranged to simulate the activities of all of said creatures; and***

***a second mode arranged to simulate an activity of at least one of said creatures at a more detailed level than said first mode; wherein a model of a creature simulated in both modes of simulation comprises at least two portions:***

***a first portion which contains functions arranged for use in both of said modes of simulation; and***

***a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode.***

(Emphasis added).

Applicants respectfully submit that independent claim 9 is allowable for at least the reason that *Meyer* in view of *Funge* does not disclose, teach, or suggest at least

"utilizing at least two modes of simulation: a first mode arranged to simulate the activities of all of said creatures; and a second mode arranged to simulate an activity of at least one of said creatures at a more detailed level than said first mode; wherein a model of a creature simulated in both modes of simulation comprises at least two portions: a first portion which contains functions arranged for use in both of said modes of simulation; and a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode," as emphasized above.

For example, *Meyer* generally summarizes the state of the art on the adaptive behavior in animats. In this review of the art, *Meyer* fails to disclose "utilizing at least two modes of simulation: a first mode arranged to simulate the activities of all of said creatures; and a second mode arranged to simulate an activity of at least one of said creatures at a more detailed level than said first mode; wherein a model of a creature simulated in both modes of simulation comprises at least two portions: a first portion which contains functions arranged for use in both of said modes of simulation; and a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode," as recited in claim 9.

Further, *Funge* describes the concept of cognitive modeling for computer animation. For example, *Funge* states that "Cognitive models go beyond behavioral models in that they govern what a character knows, how that knowledge is acquired, and how it can be used to plan physical and sensing actions." Page 41. In its description of cognitive modeling, *Funge* fails to disclose "utilizing at least two modes of

simulation: a first mode arranged to simulate the activities of all of said creatures; and a second mode arranged to simulate an activity of at least one of said creatures at a more detailed level than said first mode; wherein a model of a creature simulated in both modes of simulation comprises at least two portions: a first portion which contains functions arranged for use in both of said modes of simulation; and a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode," as recited in claim 9. For example, the final Office Action issued January 22, 2008, states that *Funge* adequately discloses the two different versions of the second portion recited above in claim 9. In response, Applicants note that *Funge* describes how researchers have turned to sophisticated machine-learning techniques to help them acquire higher fidelity on page 47. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure does not disclose a second portion of a model of a creature comprising "a first version for use in said first mode of simulation, and a second version for use in the second mode," as recited in claim 9. See page 5 of Final Office Action. Further, Applicants note that *Funge* describes a cognitive modeling hierarchy on page 42. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure also does not disclose a second portion of a model of a creature comprising "a first version for use in said first mode of simulation, and a second version for use in the second mode," as recited in claim 9. See page 5 of Final Office Action. Additionally, Applicants note that *Funge* describes the characterization of an action performed by a graphical character as either a primitive action or complex compound action on page 44. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure also does not

disclose a second portion of a model of a creature comprising "a first version for use in said first mode of simulation, and a second version for use in the second mode," as recited in claim 9. See page 5 of Final Office Action.

Therefore, Applicants respectfully submit that the individual parts of the *Funge* disclosure in total or in combination with *Meyer* fails to teach or suggest at least "utilizing at least two modes of simulation: a first mode arranged to simulate the activities of all of said creatures; and a second mode arranged to simulate an activity of at least one of said creatures at a more detailed level than said first mode; wherein a model of a creature simulated in both modes of simulation comprises at least two portions: a first portion which contains functions arranged for use in both of said modes of simulation; and a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode," as recited in claim 9.

As a result, claim 9 is patentable over *Meyer* in view of *Funge*, and the rejection of claim 9 should be overturned.

**c. Applicants' Claim 10**

As provided in independent claim 10, Applicants claim:

A method of simulating a process at two different levels of complexity, the method comprising:

***utilizing a model that comprises at least two portions:***

***a first portion which contains functions for use in both of said different complexities of simulation; and***

***a second portion comprising two alternative versions:***

***a first version for use in one of said different complexities of simulation; and***

***a second version for use in the other of said different complexities of simulation, wherein the second***

***version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version.***

(Emphasis added).

Applicants respectfully submit that independent claim 10 is allowable for at least the reason that *Meyers* in view of *Funge* does not disclose, teach, or suggest at least "utilizing a model that comprises at least two portions: a first portion which contains functions for use in both of said different complexities of simulation; and a second portion comprising two alternative versions: a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version," as emphasized above.

Rather, *Meyer* generally summarizes the state of the art on the adaptive behavior in animats. In this review of the art, *Meyer* fails to disclose "utilizing a model that comprises at least two portions: a first portion which contains functions for use in both of said different complexities of simulation; and a second portion comprising two alternative versions: a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 10.

Further, *Funge* describes the concept of cognitive modeling for computer animation. For example, *Funge* states that "Cognitive models go beyond behavioral models in that they govern what a character knows, how that knowledge is acquired, and how it can be used to plan physical and sensing actions." Page 41. In its

description of cognitive modeling, *Funge* fails to disclose "utilizing a model that comprises at least two portions: a first portion which contains functions for use in both of said different complexities of simulation; and a second portion comprising two alternative versions: a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 10. For example, the final Office Action issued January 22, 2008, states that *Funge* adequately discloses the two different versions of the second portion recited above in claim 10. In response, Applicants note that *Funge* describes how researchers have turned to sophisticated machine-learning techniques to help them acquire higher fidelity on page 47. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure does not disclose a second portion of a model of a creature comprising "a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 10. See page 5 of Final Office Action. Further, Applicants note that *Funge* describes a cognitive modeling hierarchy on page 42. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure also does not disclose a second portion of a model of a creature comprising "a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 10. See page 5 of Final Office Action. Additionally, Applicants note that *Funge* describes the characterization of an action performed by a graphical character as either a primitive action or complex compound action on page 44. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure also does not disclose a second portion of

a model of a creature comprising "a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation," as recited in claim 10. See page 5 of Final Office Action.

Therefore, Applicants respectfully submit that the individual parts of the *Funge* disclosure in total or in combination with *Meyer* fails to teach or suggest at least "utilizing a model that comprises at least two portions: a first portion which contains functions for use in both of said different complexities of simulation; and a second portion comprising two alternative versions: a first version for use in one of said different complexities of simulation; and a second version for use in the other of said different complexities of simulation, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version," as recited in claim 10.

As a result, claim 10 is patentable over *Meyer* in view of *Funge*, and the rejection of claim 10 should be overturned. Dependent claims 11 and 13 are allowable as a matter of law for at least the reason that dependent claims 11 and 13 contain all the features of allowable independent claim 10. For at least this reason, the rejections of claims 11 and 13 should also be overturned.

d. Applicants' Claim 14

As provided in independent claim 14, Applicants claim:

A simulator device arranged to simulate a creature in two different complexities of simulation, ***the device being arranged to utilise a model of the creature that comprises at least two portions: a first portion which contains functions used in both of said different complexities of simulation; and a second portion comprising two alternative versions, a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation.***

(Emphasis added).

Applicants respectfully submit that independent claim 14 is allowable for at least the reason that *Meyers* in view of *Funge* does not disclose, teach, or suggest at least a "device being arranged to utilise a model of the creature that comprises at least two portions: a first portion which contains functions used in both of said different complexities of simulation; and a second portion comprising two alternative versions, a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation," as emphasized above.

For example, *Meyer* generally summarizes the state of the art on the adaptive behavior in animats. In this review of the art, *Meyer* fails to disclose a "device being arranged to utilise a model of the creature that comprises at least two portions: a first portion which contains functions used in both of said different complexities of simulation; and a second portion comprising two alternative versions, a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation," as recited in claim 14.

Further, *Funge* describes the concept of cognitive modeling for computer animation. For example, *Funge* states that "Cognitive models go beyond behavioral models in that they govern what a character knows, how that knowledge is acquired, and how it can be used to plan physical and sensing actions." Page 41. In its description of cognitive modeling, *Funge* fails to disclose a "device being arranged to utilise a model of the creature that comprises at least two portions: a first portion which contains functions used in both of said different complexities of simulation; and a second portion comprising two alternative versions, a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation, as recited in claim 14. For example, the final Office Action issued January 22, 2008, states that *Funge* adequately discloses the two different versions of the second portion recited above in claim 14. In response, Applicants note that *Funge* describes how researchers have turned to sophisticated machine-learning techniques to help them acquire higher fidelity on page 47. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure does not disclose a second portion of a model of a creature comprising "a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation," as recited in claim 14. See page 5 of Final Office Action. Further, Applicants note that *Funge* describes a cognitive modeling hierarchy on page 42. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure also does not disclose a second portion of a model of a creature comprising "a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation," as recited

in claim 14. See page 5 of Final Office Action. Additionally, Applicants note that *Funge* describes the characterization of an action performed by a graphical character as either a primitive action or complex compound action on page 44. Accordingly, Applicants respectfully submit that this part of the *Funge* disclosure also does not disclose a second portion of a model of a creature comprising "a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation," as recited in claim 14. See page 5 of Final Office Action.

Therefore, Applicants respectfully submit that the individual parts of the *Funge* disclosure in total or in combination with *Meyer* fails to teach or suggest at least a "device being arranged to utilise a model of the creature that comprises at least two portions: a first portion which contains functions used in both of said different complexities of simulation; and a second portion comprising two alternative versions, a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation," as recited in claim 14.

As a result, claim 14 is patentable over *Meyer* in view of *Funge*, and the rejection of claim 14 should be overturned.

### **VIII. Conclusion**

In summary, it is Applicants' position that Applicants' claims are patentable over the applied cited art references and that the rejection of these claims should be overturned. Appellant therefore respectfully requests that the Board of Appeals overturn the Examiner's rejection and allow Applicants' pending claims.

Respectfully submitted,

By:

  
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**Claims Appendix under 37 C.F.R. § 41.37(c)(1)(viii)**

The following are the claims that are involved in this Appeal.

1. A method of simulating a creature for use in two different complexities of simulation, the method comprising:

utilizing a model of the creature that comprises at least two portions:

a first portion which contains functions for use in both of said different complexities of simulation; and

a second portion comprising two alternative versions:

a first version for use in one of said different complexities of simulation; and

a second version for use in the other of said different complexities of simulation,

wherein said first portion comprises a behavior selection mechanism arranged to select the behavior of said creature and said second portion is arranged to execute the selected behavior.

2. Canceled

3. A method as claimed in claim 2, wherein said behavior selection mechanism is arranged to select the behavior based upon at least one of:

the current behavioral state;

one or more internal state variables of the creature;

the environment surrounding the creature; and

one or more sensory inputs to said creature.

4. A method as claimed in claim 2, wherein said behavior selection mechanism consists of a set of mutually exclusive behavioral states.

5. A method as claimed in claim 1, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version.

6. A method as claimed in claim 1, wherein the first version utilizes a neural network.

7. Canceled

8. A method as claimed in claim 1, wherein the first version utilizes a three dimensional physical simulation of an animat, and the second version utilizes a parameterized model of the animat to approximate movement.

9. A method of simulating activities of a plurality of creatures, the method comprising utilizing at least two modes of simulation:

a first mode arranged to simulate the activities of all of said creatures; and

a second mode arranged to simulate an activity of at least one of said creatures at a more detailed level than said first mode, wherein a model of a creature simulated in both modes of simulation comprises at least two portions:

a first portion which contains functions arranged for use in both of said modes of simulation; and

a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode.

10. A method of simulating a process at two different levels of complexity, the method comprising:

utilizing a model that comprises at least two portions:

a first portion which contains functions for use in both of said different complexities of simulation; and

a second portion comprising two alternative versions:

a first version for use in one of said different complexities of simulation; and

a second version for use in the other of said different complexities of simulation, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version.

11. A method as claimed in claim 10, further comprising evaluating one or more conditions to determine a result of a rule for selecting which of the two alternative versions of the second portion to use in simulating the process.

12. Canceled

13. A method as claimed in claim 10, wherein the first version utilizes a neural network.

14. A simulator device arranged to simulate a creature in two different complexities of simulation, the device being arranged to utilise a model of the creature that comprises at least two portions:

a first portion which contains functions used in both of said different complexities of simulation; and

a second portion comprising two alternative versions, a first version used in one of said different complexities of simulation, and second version used in the other of said different complexities of simulation, wherein the second version is for use in the less complex of the simulations, and is arranged to approximate the functionality of the first version.

**Evidence Appendix under 37 C.F.R. § 41.37(c)(1)(ix)**

There is no extrinsic evidence to be considered in this Appeal. Therefore, no evidence is presented in this Appendix.

**Related Proceedings Appendix under 37 C.F.R. § 41.37(c)(1)(x)**

There are no related proceedings to be considered in this Appeal. Therefore, no such proceedings are identified in this Appendix.